



SEQUENCE LISTING

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<120> ANTI-MICROBIAL PROTEIN

<130> CULLN18.1CP1C1

<150> 09/364395

<151> 1999-07-30

<150> 09/117615

<151> 1998-11-09

<150> PCT/AU97/00052

<151> 1997-01-31

<150> AU PN 7802

<151> 1996-01-31

<160> 21

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 102

<212> PRT

<213> Macadamia integrifolia

<400> 1

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Ile	Ala	Met	Ala	Ser	Glu	Met	Val	Asn	Gly	Ser	Ala	Phe	Thr	Val	Trp
			20					25					30		
Ser	Gly	Pro	Gly	Cys	Asn	Asn	Arg	Ala	Glu	Arg	Tyr	Ser	Lys	Cys	Gly
		35					40					45			
Cys	Ser	Ala	Ile	His	Gln	Lys	Gly	Gly	Tyr	Asp	Phe	Ser	Tyr	Thr	Gly
	50					55				60					
Gln	Thr	Ala	Ala	Leu	Tyr	Asn	Gln	Ala	Gly	Cys	Ser	Gly	Val	Ala	His
65				70					75					80	
Thr	Arg	Phe	Gly	Ser	Ser	Ala	Arg	Ala	Cys	Asn	Pro	Phe	Gly	Trp	Lys
			85						90					95	
Ser	Ile	Phe	Ile	Gln	Cys										
			100												

<210> 2

<211> 493

<212> DNA

<213> Macadamia integrifolia

<220>

<221> CDS

<222> (70)...(375)

<223> y=t or c.

<400> 2

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acctcagcc atg gct tcc acc aag ttg ttc ttc tca gtc att act gtg atg 111

Met Ala Ser Thr Lys Leu Phe Phe Ser Val Ile Thr Val Met
1 5 10

atg ctc ata gca atg gca agt gag atg gtg aat ggg agt gca ttt aca 159
Met Leu Ile Ala Met Ala Ser Glu Met Val Asn Gly Ser Ala Phe Thr
15 20 25 30

gta tgg agt ggt cca ggt tgt aac aac cgt gct gag cga tat agc aag 207
Val Trp Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu Arg Tyr Ser Lys
35 40 45

tgt gga tgc tca gct ata cat cag aag gga ggc tat gac ttc agc tac 255
Cys Gly Cys Ser Ala Ile His Gln Lys Gly Gly Tyr Asp Phe Ser Tyr
50 55 60

act gga caa act gct gct ctc tac aac cag gct gga tgc agt ggt gtt 303
Thr Gly Gln Thr Ala Ala Leu Tyr Asn Gln Ala Gly Cys Ser Gly Val
65 70 75

gca cac acc agg ttt ggg tcc agt gcc agg gca tgc aac cct ttt ggt 351
Ala His Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys Asn Pro Phe Gly
80 85 90

tgg aag agt atc ttc atc caa tgc tagatttcat aactcttgga tccatcttct 405
Trp Lys Ser Ile Phe Ile Gln Cys
95 100

atgtttttca agtgtataat tagagagatg catggatata taataaataa gtaaaagcta 465
cggtatcacc atgtgatgat ttttacc 493

<210> 3

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Degenerate primer alpha.

<400> 3

ccgaagcagt tgcabgcbc

19

<210> 4

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Degenerate primer beta.

<400> 4

gagmgktatw skaagtgtgg

20

<210> 5
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> 3' RACE primer alpha.

<400> 5 20
 tgctctctac aaccaggctg

<210> 6
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> 5' RACE primer beta.

<400> 6 19
 gcattggatg aagatactc

<210> 7
 <211> 36
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> 5' RACE primer to anneal with poly-C-tailed cDNA
 primer alpha.

<221> misc_feature
 <222> (0)...(0)
 <223> n = inosine

<400> 7 36
 ggccacgcgt cgactagtagt gggnnngggnn gggnnng

<210> 8
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Mi28K primer. Mismatched oligonucleotide
 containing a mutation of the MiAMP1 coding
 sequence from amino acid Q(position 28) to K.

<400> 8 20
 gctatacata aaaagggagg

<210> 9
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Mi39K primer. Mismatched oligonucleotide containing a mutation of the MiAMP1 coding sequence from amino acid Q(position 39) to K.

<400> 9

tacactggaa aaactgctgc

20

<210> 10

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Mi46K primer. Mismatched oligonucleotide containing a mutation of the MiAMP1 coding sequence from amino acid Q(position 46) to K.

<400> 10

gcatccagct ttgttgtaga gagc

24

<210> 11

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Mi54V primer. Mismatched oligonucleotide containing a mutation of the MiAMP1 coding sequence from amino acid H(position 54) to V.

<400> 11

ggtgttgagcag tgaccagggtt tggg

24

<210> 12

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Mi54K primer. Mismatched oligonucleotide containing a mutation of the MiAMP1 coding sequence from amino acid H(position 54) to K.

<400> 12

ggtgttgcaa aaaccagggtt tggg

24

<210> 13

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide primer from the 5' coding region of MiAMP1 (Mil primer).

<400> 13

acaccatattg agtgcattta cagtatgagt g

<210> 14
 <211> 35
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide primer from the 3' coding region
 of MiAMP1 (Mi2 primer).

<400> 14
 gaagagtatc ttcattccaat gctaaggatc cacac

35

<210> 15
 <211> 76
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Mi28K variant. Variant MiAMP1 protein Mi28K
 containing a Lysine at amino acid 28 (used primer
 from SEQ ID NO:8 to produce).

<400> 15
 Ser Ala Phe Thr Val Trp Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu
 1 5 10 15
 Arg Tyr Ser Lys Cys Gly Cys Ser Ala Ile His Lys Lys Gly Gly Tyr
 20 25 30
 Asp Phe Ser Tyr Thr Gly Gln Thr Ala Ala Leu Tyr Asn Gln Ala Gly
 35 40 45
 Cys Ser Gly Val Ala His Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys
 50 55 60
 Asn Pro Phe Gly Trp Lys Ser Ile Phe Ile Gln Cys
 65 70 75

<210> 16
 <211> 76
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Mi39K variant. Variant MiAMP1 protein Mi39K
 containing a Lysine at amino acid 39 (used primer
 from SEQ ID NO:9 to produce).

<400> 16
 Ser Ala Phe Thr Val Trp Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu
 1 5 10 15
 Arg Tyr Ser Lys Cys Gly Cys Ser Ala Ile His Gln Lys Gly Gly Tyr
 20 25 30
 Asp Phe Ser Tyr Thr Gly Lys Thr Ala Ala Leu Tyr Asn Gln Ala Gly
 35 40 45
 Cys Ser Gly Val Ala His Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys
 50 55 60
 Asn Pro Phe Gly Trp Lys Ser Ile Phe Ile Gln Cys
 65 70 75

<210> 17
 <211> 76
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Mi46K variant. Variant MiAMP1 protein Mi46K
 containing a Lysine at amino acid 46 (used primer
 from SEQ ID NO:10 to produce).

<400> 17
 Ser Ala Phe Thr Val Trp Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu
 1 5 10 15
 Arg Tyr Ser Lys Cys Gly Cys Ser Ala Ile His Gln Lys Gly Gly Tyr
 20 25 30
 Asp Phe Ser Tyr Thr Gly Gln Thr Ala Ala Leu Tyr Asn Lys Ala Gly
 35 40 45
 Cys Ser Gly Val Ala His Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys
 50 55 60
 Asn Pro Phe Gly Trp Lys Ser Ile Phe Ile Gln Cys
 65 70 75

<210> 18
 <211> 76
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Mi54V variant. Variant MiAMP1 protein Mi54V
 containing a Valine at amino acid 54 (used primer
 from SEQ ID NO:11 to produce).

<400> 18
 Ser Ala Phe Thr Val Trp Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu
 1 5 10 15
 Arg Tyr Ser Lys Cys Gly Cys Ser Ala Ile His Gln Lys Gly Gly Tyr
 20 25 30
 Asp Phe Ser Tyr Thr Gly Gln Thr Ala Ala Leu Tyr Asn Gln Ala Gly
 35 40 45
 Cys Ser Gly Val Ala Val Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys
 50 55 60
 Asn Pro Phe Gly Trp Lys Ser Ile Phe Ile Gln Cys
 65 70 75

<210> 19
 <211> 76
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Mi54K variant. Variant MiAMP1 protein Mi54K
 containing a Lysine at amino acid 54 (used primer
 from SEQ ID NO:12 to produce).

<400> 19
 Ser Ala Phe Thr Val Trp Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu

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      1                    5                    10                    15
Arg Tyr Ser Lys Cys Gly Cys Ser Ala Ile His Gln Lys Gly Gly Tyr
      20                    25                    30
Asp Phe Ser Tyr Thr Gly Gln Thr Ala Ala Leu Tyr Asn Gln Ala Gly
      35                    40                    45
Cys Ser Gly Val Ala Lys Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys
      50                    55                    60
Asn Pro Phe Gly Trp Lys Ser Ile Phe Ile Gln Cys
      65                    70                    75

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<210> 20
 <211> 76
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Mi46K/54V variant. Variant MiAMP1 protein
 Mi46K/54V containing a Lysine at amino acid 46 and
 a Valine at amino acid 54.

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<400> 20
Ser Ala Phe Thr Val Trp Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu
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Arg Tyr Ser Lys Cys Gly Cys Ser Ala Ile His Gln Lys Gly Gly Tyr
      20                    25                    30
Asp Phe Ser Tyr Thr Gly Gln Thr Ala Ala Leu Tyr Asn Lys Ala Gly
      35                    40                    45
Cys Ser Gly Val Ala Val Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys
      50                    55                    60
Asn Pro Phe Gly Trp Lys Ser Ile Phe Ile Gln Cys
      65                    70                    75

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<210> 21
 <211> 76
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Mi46K/54K variant. Variant MiAMP1 protein
 Mi46K/54K containing a Lysine at amino acid 46 and
 a Lysine at amino acid 54.

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<400> 21
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      1                    5                    10                    15
Arg Tyr Ser Lys Cys Gly Cys Ser Ala Ile His Gln Lys Gly Gly Tyr
      20                    25                    30
Asp Phe Ser Tyr Thr Gly Gln Thr Ala Ala Leu Tyr Asn Lys Ala Gly
      35                    40                    45
Cys Ser Gly Val Ala Lys Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys
      50                    55                    60
Asn Pro Phe Gly Trp Lys Ser Ile Phe Ile Gln Cys
      65                    70                    75

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